

REMARKS

1. Status of the Application

Claims 1-28 are currently pending in the present application. The Examiner deemed claims 15, 16 and 18-20 as being allowable if rewritten in independent form. The Examiner has rejected claims 1-14, 17, 21, 23-24 under 35 U.S.C. § 102(b) as being anticipated by U.S. Patent No. 4,378,569 to Dallas, Jr. et al. (“Dallas”). Claims 22, 25-26 and 28 have been rejected under 35 U.S.C. § 103(a) as being unpatentable over Dallas in view of U.S. Patent No. 5,097,326 to Meijer (“Meijer”). The Examiner has also objected to claims 4, 18 and 28 due to certain informalities. By this Reply, claims 9 and 10 have been canceled. Claims 1, 2, 4-6, 8, 11, 13, 18, 21, 23 and 28 have been amended, and claims 29 and 30 have been added. No new matter has been added. Accordingly, claims 1-8 and 11-30 are at issue here.

2. Objections to Claims Due to Informalities

Examiner has objected to claims 4, 18 and 28 due to certain informalities. These claims have been amended to address Examiner’s objections. In view of the above amendments, Applicants submit that Examiner’s objections are now moot.

3. Rejection of Claims Under 35 U.S.C. § 102(b)

Claims 1-14, 17, 21 and 23-24 are stand rejected under 35 U.S.C. § 102(b) as being anticipated by Dallas. Applicants respectfully traverse this rejection.

In order for a reference to constitute a §102(b) bar to patentability, the reference must disclose each and every element of the claimed invention. *Kalman v. Kimberly-Clark Corp.*, 713 F.2d 760, 771, 218 U.S.P.Q. 781, 789 (Fed. Cir. 1983). Applicant respectfully submits that Dallas does not disclose, teach or suggest each and every element of claims 1-14, 17, 21 or 23-24.

As noted by the Examiner, Dallas encodes spatial information in images taken by a video camera. This is done in a series of steps in which a vertical column of the image is converted into an audible output. A vertical column comprises 64 individual channels. An audio modulator 12 produces 64 different audio channels, each audio channel corresponding to one of the 64 video channels in the vertical column. The audio channels are summed by summing circuit 18 to provide a multi-frequency audio output corresponding to the vertical column in the video image.

The system then moves to the next vertical column and repeats the process (column 2, lines 37 to 40 and 58 to 62; column 3, lines 25 to 32, and column 3, line 60 to column 4, line 6). Thus, as stated at column 3, line 65 to column 4, line 1, “vertical differences are discernable by frequency differences of the 64 channels, while horizontal characteristics are discernable by the time lapse that a specific tone is heard after the beginning of the receipt of the carrier signal.”

Amended claim 1 contains a clarified statement of the subject matter of claim 10, namely “recognizing and extracting predetermined features from the image, and encoding said predetermined features into at least one musical sequence.” These features are not disclosed, taught or even suggested by Dallas. With regard to the objections made against claim 10 in the Office Action, Examiner equates the contents of a pixel in the 64 x 64 matrix output of the video camera as a predetermined feature. Even if one accepts that the contents of each pixel can be equated with a feature contained within an image (which is denied), we submit that the contents of a pixel are in no way predetermined. Rather, the contents of a pixel at any given time depend on the image viewed by the video camera. Additionally, amended claim 1 clarifies that the predetermined features are recognized and extracted from the image. This element is clearly neither disclosed nor suggested by Dallas.

Additionally, we respectfully dispute that Dallas discloses the feature that “a subset of a full image is encoded into the at least one musical sequence” as required by amended claim 1. As noted above, each vertical column of an image in Dallas is converted into a single audible tone. A single tone is clearly not a musical sequence. Thus, this element is also not disclosed by Dallas.

Assuming, *arguendo*, that one could construe the step in Dallas in which multi-frequency audible outputs corresponding to successive vertical columns are played so that horizontal characteristics are discernable by the time lapse that a specific tone is heard which (See Dallas at column 3, line 60 to column 4, line 1) can in some way be equated to a musical sequence, this element of claim 1 (i.e., “a subset of a full image is encoded into the at least one musical sequence”) is still not disclosed in Dallas. Instead, the process in Dallas encodes the entire image into an audible sequence and not a subset of a full image as required by the present claims. The subset identified by the Examiner in the objection to claim 9 in the Office Action of 19 May 2004 is not a musical sequence. Rather, it is a series of individual audible signals

(corresponding to different pixels on a vertical column) which are summed to produce a single multi-frequency output (column 3, lines 60 to 62). Thus, this “subset” corresponds more closely to a chord as defined in claim 5, and certainly does not correspond to a musical sequence.

Additionally, Applicants note that the features introduced into claim 1 provide improved and advantageous methods of enabling a person to visualize images in which the information content presented to a person is reduced without losing important features (page 5, lines 16 to 21 and page 12, lines 13 to 20 and page 14, lines 3 to 7 of the present application). Furthermore, these features are not taught nor even suggested by Dallas. For the foregoing reasons, Applicants respectfully submit that claim 1 is patentably distinguishable from the device disclosed in Dallas.

Claims 2-8 and 11-22 all ultimately depend from claim 1 and necessarily include the limitations of claim 1. Accordingly, for the same reasons claim 1 is patentable over Dallas, claims 2-8 and 11-22 are also patentable over Dallas. Applicants, therefore, submit Examiner’s rejection under § 102 has been obviated, and respectfully request removal of the same.

4. Rejection of Claims Under 35 U.S.C. § 102(b)

Examiner has rejected claims 22, 25-26 and 28 under 35 U.S.C. §103(a) as being unpatentable over Dallas in view of Meijer. Applicants respectfully traverse this rejection.

Specifically, Examiner asserts that it would have been obvious for one of ordinary skill in the art to derive Applicants’ claimed device by modifying the teachings of Meijer and Dallas. Applicants, however, submit that neither Dallas nor Meijer alone, or combined, disclose Applicants’ claimed invention.

Claim 22 of the present Application includes the limitations of amended claim 1. Similarly, claims 25-26 and 28 include the limitations of amended claim 23. Both claims 1 and 23 include the limitation, “recognizing and extracting predetermined features from the image, and encoding said predetermined features into at least one musical sequence.” As discussed above, Dallas does not disclose, teach or suggest this element. Thus, the rejection of claims 22, 25-26 and 28 under 35 U.S.C. §103(a) is inappropriate in view of the deficiency of the primary reference.

Meijer is directed to an image processing unit with a pipelined architecture with a high level of parallelism. According to Meijer, an image is scanned in sequential vertical scanlines and the acoustical representatives of the scanlines are produced in real time. Each scanline acoustical representation is formed by sinusoidal contributions from each pixel in the scanline, the frequency of the contribution being determined by the position of the pixel in the scanline and the amplitude of the contribution being determined by the brightness of the pixel. Thus, Meijer is directed to a method of visualizing images through sound, wherein the signal representing the image can be composed of Fourier components. Notably, however, Meijer does not disclose that the Fourier components can take the form of musical sequences. This fact is clear from the remainder of the disclosure of Meijer, where non-musical waveform, not polyphonic musical sequences, are disclosed.

In view of the foregoing, Meijer does not disclose, teach or suggest, “recognizing and extracting predetermined features from the image, and encoding said predetermined features into a musical sequence or sequences” as required by Applicants’ claims. Because neither Dallas nor Meijer discloses, teaches, or suggests this elements of Applicants’ claims, their combination also would not yield this element, nor Applicant’s claimed invention. Accordingly, Applicant respectfully submits that the references cited by the Examiner cannot form a proper basis for rejection of claims 22, 25-26 and 28 under 35 U.S.C. § 103(a).

In view of the above, Applicants respectfully submit that the § 103 rejection of Claims 22, 25-26 and 28 over Dallas in view of Meijer has been obviated. Therefore, Applicants respectfully request reconsideration and removal of the same.

5. **Allowable Subject Matter**

Applicants acknowledge that claims 15-16 and 18-20 would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

6. **Conclusion**

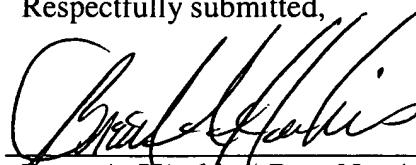
In view of the above Remarks, Applicant respectfully submits that claims 1-8 and 11-30 are patentable over the cited prior art, and are in condition for allowance. Applicant respectfully requests that the Examiner reconsider and withdraw the rejections of claims and enter an

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allowance of the same. Applicant further invites the Examiner to contact the undersigned attorney to discuss any matters pertaining to the present Application.

Respectfully submitted,

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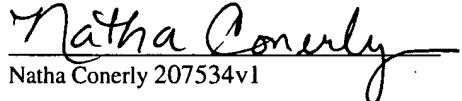
Dated: August 19, 2004

CERTIFICATION UNDER 37 C.F.R. § 1.10

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